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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,464	05/24/2004	Takeshi Sakamoto	118870	9230
25944	7590	05/09/2007		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER WONG, EDNA	
			ART UNIT 1753	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/788,464	Applicant(s) SAKAMOTO ET AL.	
	Examiner Edna Wong	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

This is in response to the Amendment dated March 15, 2007. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Arguments

Claim Rejections - 35 USC § 102

I. Claims **11-15** have been rejected under 35 U.S.C. 102(b) as being anticipated by **JP 2002-212775 ('775)**.

The rejection of claims 11-15 under 35 U.S.C. 102(b) as being anticipated by JP 2002-212775 ('775) has been withdrawn in view of Applicants' amendment. Claims 11-15 have been canceled.

II. Claim **16** has been rejected under 35 U.S.C. 102(b) as being anticipated by **JP 2002-212775 ('775)**.

The rejection of claim 16 under 35 U.S.C. 102(b) as being anticipated by JP 2002-212775 ('775) has been withdrawn in view of Applicants' amendment. Claim 16 has been canceled.

Claim Rejections - 35 USC §103

I. Claims **1-8** have been rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **JP 2002-212775 ('775)** in

combination with **Du Rose et al.** (US Patent No. 3,183,067).

With regards to claim **4**, the rejection under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 2002-212775 ('775) in combination with Du Rose et al. has been withdrawn in view of Applicants' amendment. Claim 4 has been canceled.

With regards to claims **1-3 and 5-8**, the rejection under 35 U.S.C. 102(b) as anticipated by JP 2002-212775 ('775) in combination with Du Rose et al. has been withdrawn in view of Applicants' amendment.

With regards to claims **1-3 and 5-8**, the rejection under 35 U.S.C. 103(a) as obvious over JP 2002-212775 ('775) in combination with Du Rose et al. is as applied in the Office Action dated November 15, 2006 and incorporated herein. The rejection has been maintained for the following reasons:

Applicants state that Oshima, in fact, teaches the nickel ion concentrations relative to the concentration of chlorine ions in the range of 15 g/l-80 g/l, or 0.25 mol/l-1.3 mol/l. Oshima does not teach the nickel source having a concentration of 0.3 mol/l to 0.7 mol/l, as positively recited in claim 1.

In response, the range of 0.3 mol/l to 0.7 mol/l recited in claim 1 overlaps with the range of 0.25 mol/l-1.3 mol/l disclosed by Oshima. In the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists (MPEP § 2144.05(I)).

Applicants state that the 0.3 mol/l to 0.7 mol/l nickel concentration recited in claim 1 produces unexpected results. At least the combination of nickel concentration in the range of 0.3 mol/l to 0.7 mol/l and conductivity over 80 mS/cm as recited in claim 1, produce unexpected results over the prior art.

In response, Oshima teaches a plating bath in a similar manner as presently claimed. If the composition is physically the same, it must have the same properties. Products of identical chemical composition can not have mutually exclusive properties. A chemical composition and its properties are inseparable (MPEP § 2112.01(II)).

Furthermore, a known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use, see *In re Gurley*, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994). Further, a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art, including nonpreferred embodiments, see *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989) and MPEP § 2141.02, MPEP 2145X.D.1 and MPEP § 2123.

Applicants state that the group of pH stabilizers recited in claim 1 do not include the group of oxycarboxylic acids taught by Oshima.

In response, Oshima teaches that the boric acid content in the nickel plating liquid has the buffer action excellent in the boric acid (page 1, [0002]). Oshima teaches

that the plating liquid contains 0 to 15 g/l of boric acid (page 2, [0006]).

Boric acid would have acted as a pH stabilizer in the nickel plating liquid disclosed by Oshima because a compound and all of its properties are inseparable. *In re Papesch*, 315 F.2d 381, 391, 137 USPQ 43, 51 (CCPA 1963) [MPEP § 2141.02(V)].

Furthermore, the Applicant has a different reason for, or advantage resulting from doing what the prior art relied upon has suggested, it is noted that it is well settled that this is not demonstrative of nonobviousness. *In re Kronig* 190 USPQ 425, 428 (CCPA 1976); *In re Linter* 173 USPQ 560 (CCPA 1972); the prior art motivation or advantage may be different than that of Applicants while still supporting a conclusion of obviousness. *In re Wiseman* 201 USPQ 658 (CCPA 1979); *Ex parte Obiaya* 227 USPQ 58 (Bd. of App. 1985) and MPEP § 2144.

Applicants state that Table 2 of the Appendix shows Comparative Examples 7-13, in which the inventors developed a protective film formed by electroplating a rare-earth magnet in a plating bath using an oxycarboxylic acid as a buffer. As seen in Table 2, like Table 1, the results of the salt spray test on Comparative Examples 7-13 were also poor.

In response, Oshima teaches a method in a similar manner as presently claimed. Similar processes can reasonably be expected to yield products which inherently have the same properties. *In re Spada* 15 USPQ 2d 1655 (CAFC 1990); *In re DeBlauwe* 222 USPQ 191; *In re Wiegand* 86 USPQ 155 (CCPA 1995).

Furthermore, the plating bath as presently claimed is open to including an oxycarboxylic acid.

Furthermore, the inoperativeness of a reference is not established by merely showing that a particular disclosed embodiment is lacking in perfection does not establish non-obviousness. *Ex parte Allen* 2 USPQ 2d 1425 (BPAI 19870; *Decca Ltd. V. United States* 191 USPQ 439 (Ct. Cl. 1976); *Bennett v. Halahan* 128 USPQ 398, 401 (CCPA 1961).

II. Claims **9 and 10** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 2002-212775** ('775) in combination with **Du Rose et al.** (US Patent No. 3,183,067).

The rejection of claims 9 and 10 under 35 U.S.C. 103(a) as being unpatentable over JP 2002-212775 ('775) in combination with Du Rose et al. has been withdrawn in view of Applicants' amendment.

Response to Amendment

Claim Rejections - 35 USC § 103

Claims **9 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 2002-212775** ('775) in combination with **Du Rose et al.** (US Patent No. 3,183,067) and **Martin** (US Patent No. 2,986,501).

JP '775 teaches a method of manufacturing a rare-earth magnet, comprising the

steps of:

(a) electroplating a first protective film including nickel (= a nickel plating coat) [page 1, [0001]] on a magnet body including a rare-earth element (= R-Fe-B system permanent magnet) [page 4, [0016]] with a first plating bath including:

(i) 0.3 mol/l to 0.7 mol/l of nickel ions (= 7 g/l to 80 g/l nickel ion) [pages 2-3, [0007]];

(ii) at least one ion selected from the group consisting of sulfate ions, chlorine ions, bromine ions, and pyrophosphate ions (= chlorine ions) [pages 2-3, [0007]];

(iii) at least one ion selected from the group consisting of sodium ions, potassium ions, lithium ions, magnesium ions and ammonium ions (= sodium sulfate, ammonium chloride, etc.) [page 3, [0012]]; and

(iv) at least one ion selected from the group consisting of borate ions and ammonium ions (= boric acid) [page 3, [0009]],

and having a conductivity of the plating bath is 80 mS/cm or over (*inherent*) [MPEP § 2112.01(II)]; and

(b) forming a second protective film including nickel on the first protective film (= 2nd layer nickel plating coat was formed on the 1st layer nickel plating coat) [col. 7, [0034]].

The second protective film is formed by electroplating with a second plating bath (= same electrolytic nickel plating conditions as in Example 4) [page 7, [0034]] including:

- (i) nickel ions (pages 2-3, [0007]);
- (ii) at least one ion selected from the group consisting of sulfate ions, chlorine ions, bromine ions, acetate ions and pyrophosphate ions (= chlorine ions) [pages 2-3, [0007]];
- (iii) at least one ion selected from the group consisting of sodium ions, potassium ions, lithium ions, magnesium ions and ammonium ions (= sodium sulfate, ammonium chloride, etc.) [page 3, [0012]]; and
- (iv) at least one ion selected from the group consisting of borate ions and ammonium ions (= boric acid) [page 3, [0009]].

The method of JP '775 differs from the instant invention because JP '775 does not disclose the following:

- a. Wherein the first plating bath includes a semi-brightener, as recited in claim 9.

JP '775 teaches coumarin (page 3, [0012]).

Like JP '775, Martin teaches a nickel electroplating method. Martin teaches that when coumarin alone is added to a standard Watts type nickel plating bath, only a matte or semi-bright deposit is produced (col. 1, lines 20-36).

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because the coumarin disclosed by JP '775 would have been a semi-brightener because when coumarin alone was added to a

standard Watts type nickel plating bath, a semi-bright deposit was produced as taught by Martin (col. 1, lines 20-36).

Furthermore, a compound and all of its properties are inseparable. *In re Papesch*, 315 F.2d 381, 391, 137 USPQ 43, 51 (CCPA 1963) [MPEP § 2141.02(V)].

- b. Wherein the second protective film includes sulfur, as recited in claim 9.
- c. Wherein the second plating bath includes an organic sulfur compound, as recited in claim 10.

JP '775 teaches brighteners containing sulfur in the nickel plating liquid (page 3, [0012]).

Like JP '775, Du Rose teaches a nickel electroplating method. Du Rose teaches that improved corrosion protection of decorative deposits has been obtained through the use of "duplex" nickel coatings (col. 1, lines 25-34). Uniformly corrosion resistant duplex nickel coated articles may be obtained by controlling the amounts of sulfur contained in both of the nickel coatings making up the duplex deposit. Sulfur in the nickel deposits is derived from the sulfo-oxygen control agents and the amount thus derived is increased by the presence of so-called brighteners containing sulfur, such as, for instance, thiourea, diethyl thiourea and isothioureadipropionic acid (col. 1, lines 48-58).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the second protective film and wherein the second plating bath includes an organic sulfur compound described by JP '775 with wherein the

second protective film includes sulfur; and wherein the second plating bath includes an organic sulfur compound because uniformly corrosion resistant duplex nickel coated articles would have been obtained by controlling the amounts of sulfur contained in both of the nickel coatings making up the duplex deposit as taught by Du Rose (col. 1, lines 48-58).

Sulfur in the nickel deposits is derived from the sulfo-oxygen control agents and the amount thus derived is increased by the presence of so-called brighteners containing sulfur as taught by Du Rose (col. 1, lines 48-58).

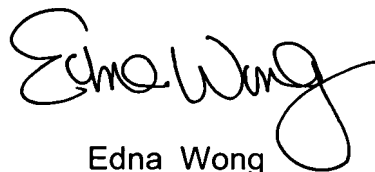
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Edna Wong', with a stylized, flowing script.

Edna Wong
Primary Examiner
Art Unit 1753

EW
May 6, 2007